

Abstract

Echo-canceling apparatus of the invention includes transfer function estimation unit which estimates a transfer function corresponding to the reverberation of a room attached to a voice after it is output from a loudspeaker and before it is input to a microphone, a first filter unit which operates using the transfer function, a first subtraction unit which subtracts the output signal of the first filter unit from the signal from the microphone, a second filter unit which operates using the transfer function copied from the first filter unit in case the estimation accuracy of the transfer function estimation unit is high, a second subtraction unit which subtracts the output signal of the second filter unit from the signal from the microphone, a singing detection unit which detects singing, a notch filter unit which notches a specific frequency band component in the signal received from a far-end speaker, and a switch unit which selects between the signal from the far-end speaker processed by the notch filter unit and the signal from the far-end speaker not processed by the notch filter unit.